MegaPower® CPU

ADMPCPU

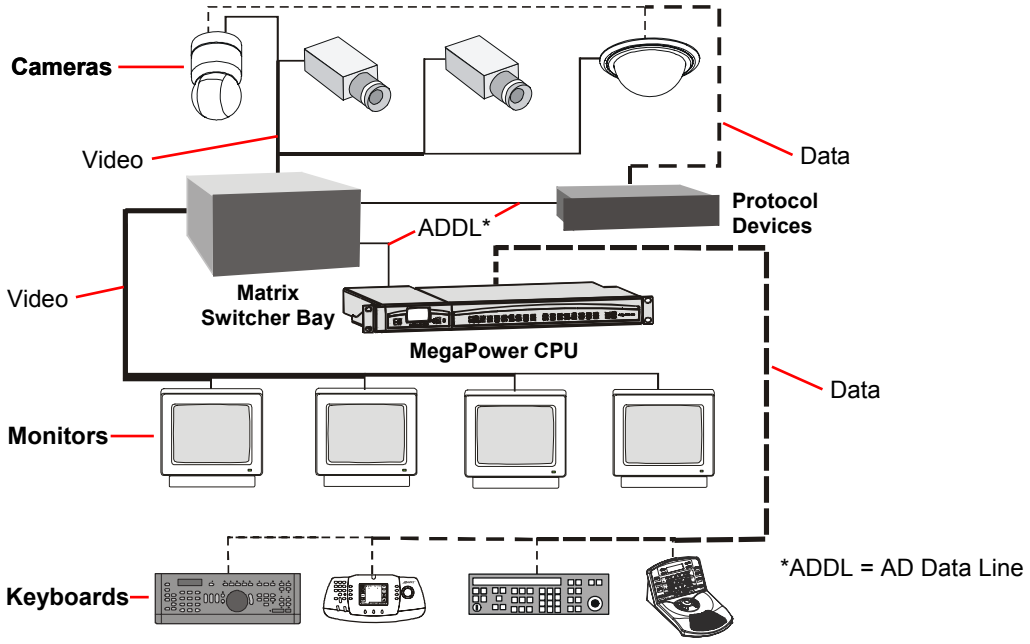
Operator's Guide

8200-0421-02 E

MegaPower® CPU

Operator's Guide

Figure 1. MegaPower 3200 Video-Matrix Closed-Circuit Television (CCTV) System



About this Guide

This Operator's Guide provides information about operating the MegaPower 3200 video-matrix closed-circuit television (CCTV) system.

Another related document is the *MegaPower CPU Administrator's Guide*, 8200-0421-03.

If you need assistance...

Contact Technical Support.

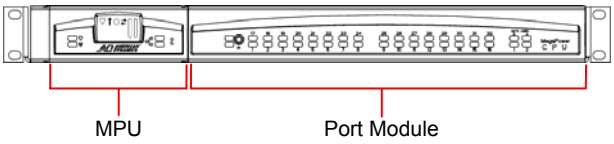
About the Product

The MegaPower CPU (Central Processing Unit) is the control unit for the MegaPower 3200 video-matrix CCTV switcher. It enables the setup and control of cameras, monitors, users, alarms, video recording, and data communications.

The MegaPower CPU (Figure 2) consists of the following major modules:

- **MPU (Multiple Purpose Unit)**: controls system operation, provides Ethernet and video data connections, image capture, input power, and dome/PTZ (pan, tilt, zoom) connections.
- **Port Module**: provides RS-232 communications ports, high-speed data lines, and alarm relay connections.

Figure 2. MegaPower CPU



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MegaPower 3200 Video-Matrix CCTV System Overview

The MegaPower CPU is part of the video-matrix switcher system and is capable of managing cameras, monitors, alarm events, and video recording at both local and satellite (remote) sites.

The MegaPower 3200 video-matrix CCTV system can respond to alarms and perform auxiliary switching for the control of gates, doors, lights, and other output devices. Depending on the control requirements of a given application, various operator keyboards and accessory devices also can be used with the system.

System Features

- Full matrix-switching capability
- Tours
- Salvos
- Timed events
- Alarm response
- Camera alarm programming
- Monitor alarm programming
- System status display
- Input identification
- User-assigned camera numbers
- Selectable date/time display
- External control inputs
- Output controls
- System security
- Partitioning
- Control over 3,200 local cameras and 256 monitors
- SensorNet support for up to 508 cameras
- Support for up to 30 satellite sites
- Control up to 96,000 remote cameras
- Control up to 38,528 remote cameras (full crosspoint connection) to 256 monitors
- Memory retention
- EASY (**E**nhanced **A**dministration **SY**stem) CPU software

System Components

MegaPower 3200 video-matrix CCTV systems can operate with a variety of components to meet the video surveillance goals of the organization. System components can include:

- The MegaPower CPU
- Camera/monitor switching bays
- Fixed cameras, pan/tilt/zoom cameras, and dome cameras
- Video monitors
- Operator keyboards
- Video recording devices
- Alarm interface units
- Video loss detection
- Auxiliary devices, such as locks, lights, and alarms
- Programming PC
- Satellite site connections
- Protocol devices

Satellite Configuration Overview

The MegaPower CPU allows local operators to access cameras and monitors located at satellite (remote) sites.

- **Site** refers to a single MegaPower CPU in a satellite network and the resources that are directly connected and accessible to it.
- **Local** refers to features that are accessible within a single site by the keyboard attached to that site's MegaPower CPU.
- **Remote** refers to features of other MegaPower CPU sites in a satellite network that are accessible from the local MegaPower 3200 video-matrix CCTV system.

Each site is assigned a site number for identification purposes. Operators use site numbers to switch from controlling local video functions to controlling video functions at satellite sites.

Operator Tasks

The MegaPower 3200 video-matrix CCTV system is configured by a system administrator via software on a personal computer. The system administrator is usually a manager-level or higher individual who will create privilege levels for operators.

Operators perform the day-to-day task of video surveillance using keyboards connected to the MegaPower CPU. They select and control cameras, create and run automated camera actions, acknowledge alarm activities, adjust monitors, and perform other functions as needed.

Typical operator control functions include:

- Keyboard passcode entry
- Video selection of local monitors and cameras
- Video selection of remote sites and cameras
- Controlling cameras (panning, tilting, and zooming)
- Activating presets and auxiliaries
- Running tours
- Running patterns
- Calling salvos
- Acknowledging alarms

Operators also create many of the automated features that make the MegaPower CPU a powerful, yet easy-to-use, CCTV surveillance system. Operators can program the following functions:

- Preset scenes
- Tours
- Patterns
- Alarming monitors

Operators also can arm monitors for use in managing alarm response.

Compatible System Keyboards

MegaPower CPU video switching and control capabilities are provided by American Dynamics keyboards. These capabilities are "monitor oriented" in that a keyboard controls only those functions associated with the monitor under control of that keyboard.

The MegaPower CPU is compatible with the following keyboards:

- AD2078A
- AD2079
- AD2088
- AD2089 (see note)
- ADCC0200
- ADCC0300
- ADCC1100
- ADTTE

Note: When the AD2089 keyboard is connected directly to the MegaPower CPU, the DVR functions are not supported.

Keyboard control functions for your keyboard are found in the appendices at the end of this guide.

For step-by-step instructions on using these keyboards with your MegaPower 3200 video-matrix CCTV system, refer to the appropriate keyboard manual.

Recording Functions

AD2088 Keyboard

The AD2088 keyboard is capable of implementing VCR (video-cassette recorder) control by the operator selecting the VCR operating mode and pressing any one of seven VCR control keys:

- Play
- Stop
- Record
- Pause
- Fast-Forward
- Rewind
- Eject

For more information on the VCR control function of the keyboard, refer to the VCR Mode function in Appendix A: Keyboard Commands for AD2088 on page 10.

ADCC0200/0300 Keyboard

The ADCC0200/0300 keyboard is capable of implementing VCR control by the operator selecting the VCR operating mode and pressing any one of six VCR control keys:

- Play
- Stop
- Record
- Pause
- Fast Forward
- Rewind

For more information on the VCR control function of the keyboard, refer to the VCR Mode function in Appendix C: Keyboard Commands for ADCC0200/0300 on page 15.

ADCC1100 Keyboard

The ADCC1100 keyboard is capable of implementing VCR control by the operator using the following VCR control keys:

- Play
- Stop
- Record
- Eject
- Pause
- Fast Forward
- Rewind

For more information on the VCR control function of the ADCC1100 keyboard, refer to the ADCC1100 Keyboard Installation and Operation Instructions, ADCC1100-HB-2.

Operating the MegaPower System

Note: Consult the Appendix section of this Guide or the Operator's Guide that came with your keyboard for step-by-step instructions on how to perform the functions described in this section.

Entering Passcodes

Passcodes can be assigned to keyboards to prevent unauthorized access to video controls. If passcodes are implemented, operators will be required to logon to the keyboard. Depending on the keyboard, both a user ID and a passcode may be required to begin operations.

Selecting a Monitor

Monitors display the video from the cameras and domes in the system. Operators must select a monitor before they can control cameras or perform other surveillance activities.

Operators are free to switch monitors as needed. For example, suppose that while operating on one monitor, another monitor begins displaying an alarm. The operator must switch to the alarming monitor in order to handle the alarm event.

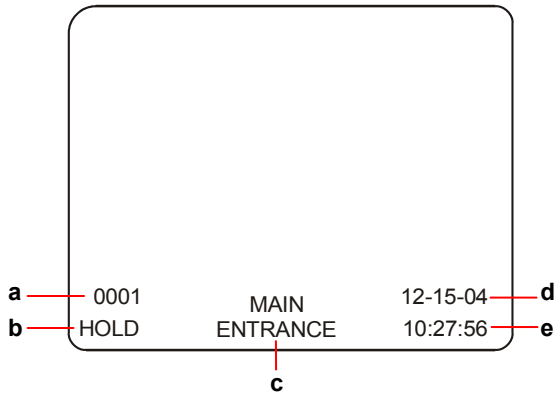
To select a monitor, the operator enters the monitor's unique identification number into the keyboard according to the keyboard's operating instructions. The monitor access is determined by the system administrator and provided to operators.

Using the Monitor Display

The monitor displays text on the screen as a reference for operators. The text displays the number of the currently called cameras, the camera title, the current date, and the time of day (Figure 3). The status line shows information about alarm conditions, tour dwell time, or camera status.

The brightness, position, and whether or not the camera title/monitor status and the time and date are displayed can be changed on a monitor-to-monitor basis according to the operator's preference.

Figure 3. Local monitor screen display



a. Camera Number
b. Monitor/Camera Status Indicator
c. Camera Title
d. Current Date
e. Current Time

Calling a Camera

After a monitor has been selected for control of the keyboard, the operator can "call" a camera to view and control. Each camera in the system is identified by a unique number that is used when calling it. It is necessary to call cameras for certain programming functions as well.

Locking a Camera

After calling a camera to a monitor, an operator can lock the camera to prevent other operators from taking control of it. This feature can be particularly important when actively following a suspect or investigating an area of interest.

When another operator calls a locked-out camera, the designated camera video displays on the monitor, but will not respond to that operator's controls. The message, "LCK KXX," (where XX is the number of the keyboard that has the locked-out camera) is displayed on the monitor to let the operator know the camera is locked out.

The default status of all cameras is unlocked.

Controlling Camera Pan/Tilt/Zoom

Operators can control the pan/tilt/zoom (PTZ) movements of motorized cameras and domes using the joystick or a similar device on the keyboard.

- **Pan** is the side-to-side movement of the camera.
- **Tilt** is the up and down movement of the camera.
- **Zoom** is the ability to move the camera's view closer to or farther away from an object.

The speed at which cameras with variable speed capability can pan or tilt is determined by how far the operator moves the joystick in any given direction. The further the joystick is pushed in one direction, the faster the camera will pan or tilt.

Controlling Camera Focus

Focus refers to the action of adjusting the clarity of the camera image on the monitor. Keyboards provide manual focus controls even though many cameras have auto-focus capability. Manual focus is sometimes needed when zooming in or out on a camera.

Controlling the Camera Iris

Normally, the brightness of the camera's picture is adequately controlled by the camera's auto iris or similar feature. However, at times the operator may want to manually adjust the iris to brighten or darken the scene to improve the camera's view.

Opening the iris brightens the scene while closing the iris darkens the scene. For example, an operator may want to open the iris to see details of a person who suddenly steps in front of a brightly lit window. Conversely, the operator may close the iris to darken the scene when panning a camera from a dark area to a bright area.

Calling Presets

A **preset** is a memorized location or scene that a pan/tilt camera can display on operator demand. Presets are also referred to as **shots** or **targets**.

The MegaPower CPU allows up to 96 presets per camera with a suitably equipped dome/PTZ device. Every preset is identified by a unique number that is used when calling it.

Notes:

- If a preset number is called and no preset scene is programmed for that camera, the pan/tilt may attempt to move to an undefined scene and camera movement may be unexpected.
- Operators can program presets while in the keyboard's Program mode.

Running Patterns

A **pattern** is a sequential series of pan/tilt/zoom and focus commands defined for a SpeedDome-series camera. Patterns can provide a convenient, automated, and continuous surveillance of a large area using only one camera.

Every pattern is identified by a unique number that is used when running it.

Patterns are created in real time, which means that the dome remembers each pattern segment in the actual time it takes the operator to execute a command. For example, if the operator holds a dome on a door for 30 seconds during programming, the door scene will appear for 30 seconds when the pattern runs. Patterns also can include stops (or pauses).

SpeedDome, SpeedDome Optima, and SpeedDome Ultra (prior to VIIE) cameras can generate three patterns each. SpeedDome Ultra VIIE cameras can generate a maximum of 16 patterns. Consult your camera dome documentation for further information.

Note: Operators can program patterns while in the keyboard's Program mode.

Running Tours

A **monitor tour** is a sequential display of several different camera views on a monitor. Monitor tours provide an effective way to see multiple areas around a facility by automatically switching to different cameras.

The MegaPower CPU is capable of displaying up to 64 different camera views in a single tour. Each camera view is displayed for a defined period of time (dwell time) before switching to the next camera.

Monitor tours can be modified while they are running to add a camera, remove a camera, or re-program a camera.

Note: Operators can program monitor tours while in the keyboard's Program mode.

System tours, which are created by administrators using the EASY CPU configuration and monitoring software, supersede monitors tours. When a system tour is started on a monitor, it will erase any monitor tour currently programmed for that monitor. After a system tour is called to a monitor, it can be altered and saved as a monitor tour. The original system tour will not be erased.

Every system tour is identified by a unique number that is used when running it.

Holding a Tour

Tours can be stopped temporarily on a single camera entry and then restarted going forward or in reverse. Holding a tour can give the operator additional time to study a particular scene.

While a tour is on hold, all keyboard control actions (pan, tilt, lens adjustment, and auxiliary on/off functions) can be performed on the held camera.

Calling Salvos

A **salvo** is a group of cameras that can be called for simultaneous display on a contiguous group of monitors. If more cameras exist in a salvo than there are monitors to display them, the cameras at the end of the salvo will not be seen.

Salvos often are used to see a large area all at once from the vantage point of several cameras in that area; for example, a parking garage with cameras installed in all four corners.

Every salvo is identified by a unique number that is used when calling it.

Working with Alarms

The MegaPower CPU can associate alarm devices with cameras so that video of important areas will be displayed on one or more monitors when an alarm occurs. The video on display can be a tour, a salvo, a preset, or a pattern. In addition to video, the monitor will display the word "ALARM." It is the responsibility of operators to respond appropriately when alarms occur.

Note: If a salvo is called in response to an alarm, the monitor displaying the first camera of the salvo will show the word "ALARM," and the monitors displaying the remaining cameras of the salvo will show the word "SALVO."

Up to 128 unique titles can be defined for display on alarming monitors or sent as e-mail messages. Up to 16 e-mail messages can be defined and assigned to alarm numbers to send when alarms occur.

Arming Monitors

Monitors must be “armed” in order to display alarms. Arming a monitor defines how it will display, queue, and clear incoming alarms. Monitor Arming is available at local sites only.

Note: Operators can arm monitors while in the keyboard’s Program mode.

Displaying Alarms

The MegaPower CPU provides three methods of displaying alarms:

- **Single Display** – incoming alarms are displayed on a single monitor. Multiple alarms received at a single monitor will be either sequenced or held based on the monitor’s alarm queuing method.
- **Dual Display** – incoming alarms are displayed on a pair of monitors. The monitor that receives the first of a series of alarms is called the **hold monitor**. Subsequent alarms are received and queued at the second, or **sequence**, **monitor**. After an alarm is cleared on the hold monitor, the first alarm in queue on the sequence monitor is moved to the hold monitor until cleared.
- **Block Display** – incoming alarms are displayed on a block (group) of monitors with which they are associated. The first incoming alarm is displayed on the first (lowest numbered) monitor of the block. The second alarm is displayed on the next lowest numbered monitor of the block, and so on. When all monitors in a given block are displaying alarm video signals, all subsequent alarms are either held in queue or sequenced until the displayed alarms are cleared depending on the monitor alarm queuing method.

Alarm Queuing Methods

Alarm queuing determines how the MegaPower CPU handles multiple incoming alarms:

- **Sequence Queuing** – incoming alarms are displayed in sequence at an armed monitor and will cycle continuously until each is cleared. Each alarm will be displayed for a pre-programmed dwell time before it is succeeded by the next received alarm.
- **Hold Queuing** – an incoming alarm is displayed and held on an armed monitor until it is cleared. All subsequent alarms are queued in order until the current held alarm is cleared.

Alarm Clearing Methods

Alarms are cleared by three different methods:

- **Manual clear** – an alarm is cleared by a system operator’s keyboard command.
- **Instant Clear** – an alarm is reset immediately at its source. For example, a door opens and activates an alarm. Closing the door clears the alarm instantly.
- **Auto Clear** – an alarm is reset at its source after a 20-second delay (if not manually acknowledged sooner). For example, a door opens and activates an alarm. Then, the door is immediately closed. In this case, the alarm will not clear until the door remains closed for a 20-second interval.

CAUTION: Do not arm any monitor output that is used as a video trunk output to a satellite site. Monitor arming cannot be changed for any monitor that has active alarms.

Controlling Auxiliaries

An **auxiliary** is a device, such as a light, audible alarm, or door lock, that can be controlled from a keyboard. For example, an operator could turn on a light in a room with a camera in it, turn off an alarm siren, or unlock a door for a guard to enter a room.

Auxiliaries are classified as either **momentary** or **latched**.

- A **momentary** auxiliary remains active as long as its control button is pressed and held; for example, holding down the button to unlock a door until the guard passes through the doorway, then releasing the button to lock the door.
- A **latched** auxiliary remains active until it is deactivated; for example, pressing a button to turn on a light, then pressing it again to turn off the light.

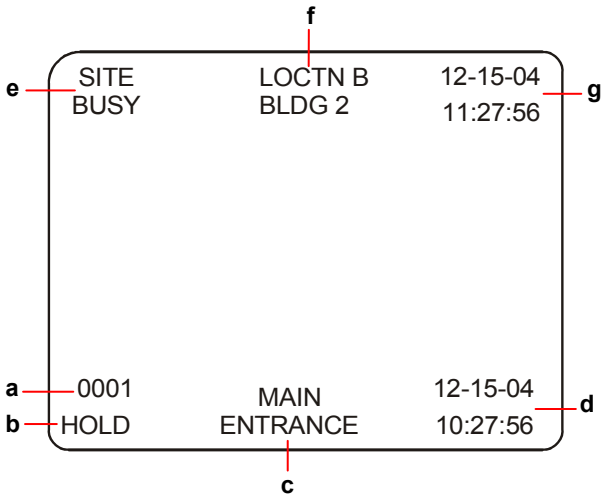
Viewing Satellite Sites

Satellite sites are locations where other MegaPower 3200 video-matrix CCTV systems are in operation and are accessible from the local MegaPower system. Local operators can access and control cameras at satellite sites.

When a satellite site is accessed, the monitor display changes to include text relevant to the satellite site (see Figure 4).

A local MegaPower 3200 video-matrix CCTV system can access up to 30 satellite sites.

Figure 4. Remote monitor screen display



a. Remote camera number
b. Remote monitor/camera status
c. Remote camera title
d. Remote date/time
e. Remote site status
f. Remote site title
g. Local date/time

Performing a Ping Test

A ping test checks and verifies the state of communications between camera domes and the MegaPower CPU. The ping test also reports configuration information from the camera dome for display on the EASY CPU camera status screen.

To initiate a ping test, enter the special function key **29-F1** on your keyboard. Refer to Appendix E: Auxiliary Key Code Functions on page 20 for a listing of keyboard special function keys.

- At the start of a ping test, the mnemonic and flash version number data are displayed on a selected monitor for a few seconds before the ping test data is collected and displayed for the remainder of the test.
- As the test progresses, the monitor displays the number of transmission attempts and the number of failure counts (up to 6 digits) of the attempts that failed to receive a reply from the dome.

A ping test allows concurrent testing of up to ten domes to different monitors.

Declarations

Regulatory Compliance

EMC.....47 CFR, Part 15
EN 50130-4
EN 55022
EN 61000-3-2
EN 61000-3-3

Safety ..... UL/IEC/EN/CSA C22.2. 60950-1

Environmental..... RoHS 2002/95/EC
WEEE 2002/96/EC
IP code X0

Regulatory Type:

ADMPCPU-MPU
ADMPCPU-PORT
ADMPCPU-TRAY

FCC COMPLIANCE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

EQUIPMENT MODIFICATION CAUTION: Equipment changes or modifications not expressly approved by Sensormatic Electronics Corporation, the party responsible for FCC compliance, could void the user's authority to operate the equipment and could create a hazardous condition.

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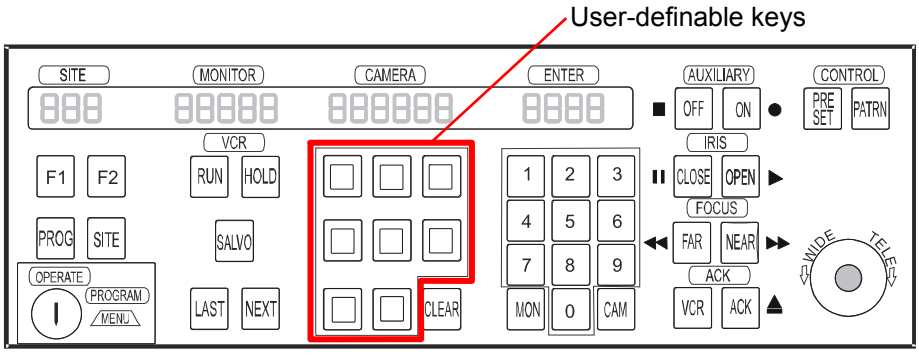
WJM 10/2008

Appendix A: Keyboard Commands for AD2088 / AD2089*

The table below explains the control functions for cameras using the AD2088 keyboard. For further information, consult the *AD2088 Keyboard Operator's Manual*, 8000-1811-01.

Figure 5. AD2088 keyboard layout



* The AD2089 keyboard has the same functions as the AD2088 keyboard except it does not provide VCR control. A DVMS (DVR) key replaces the VCR key. The AD2089 provides DVR control when connected to a PC running Network Client. The Network Client must be appropriately configured and the PC must be connected to the serial keyboard port of the MP3200 system. For more information, refer to the *Advanced Features Guide for Network Client*, 8200-0664-00.

Operator Functions

Function	Actions
Log on	❶-Enter User # ❷-press **ACK** ❸-enter passcode ❹-press **ACK**
Log off	❶-Press 99 ❷-press **F1**
Select Monitor	❶-Enter monitor # ❷-press **MON**
Call Camera	❶-Enter camera # ❷-press **CAM**
Lock Camera	❶-Enter camera # ❷-press 2 ❸-press **F1**
Unlock Camera	❶-Enter camera # ❷-press 1 ❸-press **F1**
Pan/tilt Camera	❶-Move joystick left/right or forward/backward
Zoom Camera	❶-Twist joystick clockwise to zoom in or counterclockwise to zoom out
Focus Camera	❶-Press **FAR** or **NEAR**
Adjust Iris	❶-Press iris **OPEN** or **CLOSE** to brighten or darken picture
Call Preset	❶-Call camera ❷-enter the Preset # ❸-press **PRESET** with the key in **OPERATE** mode
Run Pattern	❶-Call camera ❷-enter Pattern # ❸-press **PATRN** ❹-press **RUN** (pattern runs once) or **ACK** (pattern continuously repeats)
Run Tour	❶-Select monitor ❷-enter Tour # ❸-press **RUN** ❹-press **ACK** within 3 sec.
Control Tour	• To change the direction (forward or reverse) of executing a tour, press **NEXT** or **LAST** • To hold a tour, press **HOLD** • To manually step through the cameras of a tour that is on hold, press **NEXT** or **LAST** • To restart a tour, press **RUN**
Call Salvo	❶-Enter lowest monitor # ❷-press **MON** ❸-enter Salvo # ❹-press **SALVO**
Acknowledge Alarm	❶-Call alarming monitor ❷-press **ACK**

<table>
<tr><th>Function</th><th>Actions</th></tr>
<tr><td>Control Auxiliary</td><td>❶-Call camera ❷-select auxiliary number 1–4 ❸-press AUX ON or AUX OFF to turn the specified auxiliary on or off

Note: Not all domes/PTZ devices support AUX4.</td></tr>
<tr><td>View Satellite Sites</td><td>❶-Call local monitor # ❷-enter site # ❸-press SITE ❹-call remote camera #</td></tr>
<tr><td>VCR Mode</td><td>❶-Turn keyswitch to OPERATE ❷-enter VCR # ❸-Press VCR ❹-Select VCR function by pressing the appropriate key shown below:
<table>
<tr><th>VCR Function</th><th>Icon</th><th>Key Label</th></tr>
<tr><td>Stop</td><td>■</td><td>Off</td></tr>
<tr><td>Record</td><td>●</td><td>On</td></tr>
<tr><td>Pause</td><td>❚❚</td><td>Close</td></tr>
<tr><td>Play</td><td>▶</td><td>Open</td></tr>
<tr><td>Rewind</td><td>▶▶</td><td>Near</td></tr>
<tr><td>Fast Forward</td><td>◀◀</td><td>Far</td></tr>
<tr><td>Eject</td><td>▲</td><td>ACK</td></tr>
</table></td></tr>
<tr><td>Disconnect/Log Off Satellite</td><td>❶-Press SITE ❷-call local camera</td></tr>
<tr><td>DirectSet
(SensorNet only)</td><td>• ❶-Press Hold only to display or close the DirectSet menu when not running a tour or attached to an alarming monitor, or
• ❶-Enter 0 ❷-press Hold to display or close the DirectSet menu, or
• ❶-Enter a number ❷-press Hold to select a DirectSet menu command whether or not the menu is displayed

Note: All SpeedDome Optima camera domes can receive DirectSet commands, but do not display the menus.</td></tr>
</table>

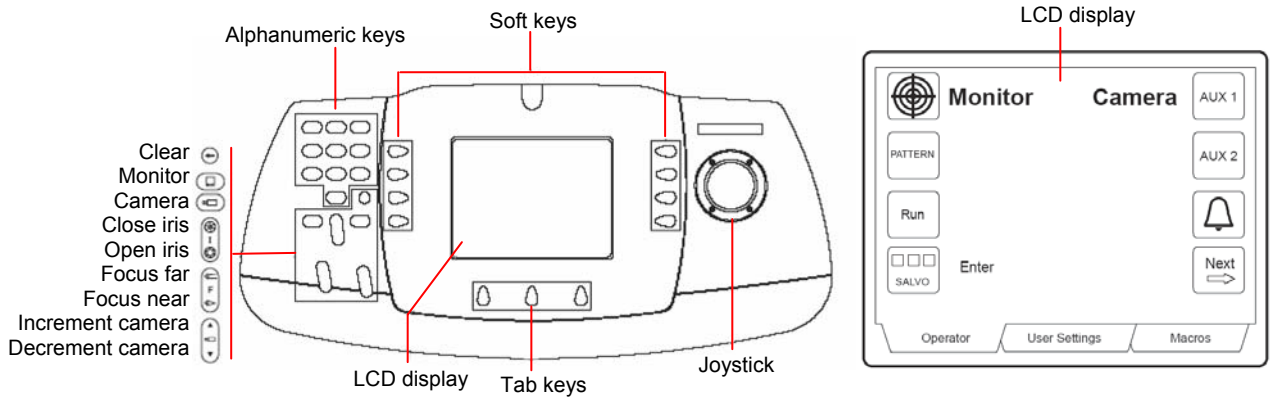
Programming Functions

Function	Action
Program Presets	❶-Call monitor and camera ❷-set keyswitch to **PROGRAM** ❸-move camera to position ❹-enter Preset # ❺-press **PRESET** ❻-set keyswitch to **OPERATE**
Program Patterns	❶-Call monitor and camera ❷-set keyswitch to **PROGRAM** ❸-enter Pattern # ❹-press **PATRN** ❺-press **PROG** ❻-maneuver camera ❼-press **ACK**
Clear Patterns (RS-422 only)	❶-Set keyswitch to **PROGRAM** ❷-enter Pattern # ❸-press **PATRN** ❹-press **CLEAR**
Program Monitor Tours	❶-Call monitor ❷-set keyswitch to **PROGRAM** ❸-enter 62, then press **PROG** ❹-enter camera # ❺-press **CAM** ❻-enter dwell time, the press **PROG** ❼-repeat steps 4–6 until all cameras have been programmed (or the maximum count of 64 entries is reached) ❽-press **RUN** to run the Tour
Arm Monitor	❶-Call monitor ❷-set keyswitch to **PROGRAM** ❸-enter arming type ID # (301–315) ❹-press **F2**
Disarm Monitor	❶-Call monitor ❷-set keyswitch to **PROGRAM** ❸-press **316**, then **F2**
Display Current Monitor Arming Type	❶-Call monitor ❷-set keyswitch to **PROGRAM** ❸-press **300**, then **F2**

Appendix B: Keyboard Commands for ADCC1100

The table below explains the control functions for cameras using the ADCC1100 keyboard. For further information, refer to the American Dynamics *ControlCenter™ ADCC1100 Keyboard Installation and Operation Instructions*, ADCC1100-HB-2.

Figure 6. ADCC1100 keyboard layout



Note: The LCD display shown here is generated by an Operator Smart Card. A Supervisor/Admin Smart Card generates a different display that changes the middle tab to “Program Mode” and presents a different set of icons.

Operator Functions

Function	Actions
Logon—Mode 1	❶-Insert smart card
Logon—Mode 2	❶-Insert smart card ❷-enter PIN ❸-press **Enter** soft key
Logon—Mode 3	❶-Insert smart card ❷-enter User ID ❸-press **Enter** soft key ❹-enter **PIN** ❺-press **Enter** soft key
Select Monitor	❶-Enter monitor # ❷-press **MONITOR**
Call Camera	❶-Enter camera # ❷-press **CAMERA**
Pan/tilt Camera	❶-Move joystick left/right or forward/backward
Zoom Camera	❶-Twist joystick clockwise to zoom in or counterclockwise to zoom out
Focus Camera	❶-Press **FOCUS FAR** key or **FOCUS NEAR**
Adjust Iris	❶-Press iris **OPEN** or **CLOSE** to brighten or darken picture
Auto Iris	❶-Press **OPERATOR** tab key ❷-press **Next** soft key ❸-press **AUTO IRIS** soft key
Camera Flip	❶-Press **OPERATOR** tab key ❷-press **Next** soft key ❸-press **FLIP** soft key
Call Preset	❶-Call camera ❷-enter the Preset # ❸-press **PRESET** soft key in Operator tab
Run Tour	❶-Select monitor ❷-enter Tour # ❸-press **Run** soft key

Function	Actions
Control Tour	To stop a tour, press **HOLD** [Hold] soft key To restart a tour forward, press **Run** [Run] soft key To change direction (forward or reverse) of executing a tour, press ▼ key or ▲ key To manually step through the cameras of a tour that is on hold, press ▼ key or ▲ key
Call Salvo	❶-Enter lowest monitor # ❷-press **MONITOR** ❸-enter Salvo # ❹-press **SALVO** [SALVO] soft key
Acknowledge Alarm	❶-Call alarming monitor ❷-press **ALARM** soft key
View Multiple Alarms	❶-Press **RUN/HOLD** soft key ❷-press ▼ key or ▲ key
Control Auxiliary	❶-Call camera ❷-press [AUX 1] = auxiliary currently off, turns auxiliary on; [AUX 1] = auxiliary currently on, turns auxiliary off
Lock Camera	❶-Enter camera # ❷-press **CAMERA** ❸-press **OPERATOR** tab key, then **NEXT** [Next] soft key ❹-press **LOCK CAMERA** [LOCK] soft key
Unlock Camera	❶-Enter camera # ❷-press **CAMERA** ❸-press **OPERATOR** tab key, then **NEXT** [Next] soft key ❹-press **UNLOCK CAMERA** [UNLOCK] soft key
View Satellite Sites	❶-Press **OPERATOR** tab key ❷-press **NEXT** [Next] soft key ❸-enter site # ❹-press **SITE** soft key ❺-call remote cameras as if local **Note:** This function only displays the previous user-selected site number.
Disconnect/Log Off Satellite	❶-Press **OPERATOR** tab key ❷-press **NEXT** [Next] soft key ❸-enter local site # ❹-press **SITE** soft key ❺-call local camera
Run Pattern	❶-Press **OPERATOR** tab key ❷-call camera ❸-enter Pattern # ❹-press **PATTERN** [PATTERN] soft key
Keyboard Brightness	**Operator Mode Smart Card:** ❶-Press **USER SETTINGS** tab key ❷-press + or – soft keys to increase/decrease brightness **Administrator/Supervisor Smart Card:** ❶-Press **PROGRAM MODE** tab key ❷-press **KEYB CONFIG** [Keyb Config] soft key ❸-press + or – soft keys to increase/decrease brightness
Keyboard Contrast	**Operator Mode Smart Card:** ❶-Press **USER SETTINGS** tab key ❷-press + or – soft keys to increase/decrease contrast **Administrator/Supervisor Smart Card:** ❶-Press **PROGRAM MODE** tab key ❷-press **KEYB CONFIG** [Keyb Config] soft key ❸-press + or – soft keys to increase/decrease contrast
Run Macro	❶-Press **MACROS** tab key ❷-press **NEXT** or **PREVIOUS** to select desired macro page ❸-press soft key associated with macro's icon

Programming Functions

Note: Functions having an asterisk (*) in the Function column require a supervisor or administrator-level Smart Card for access to the **PROGRAM MODE** tab key.

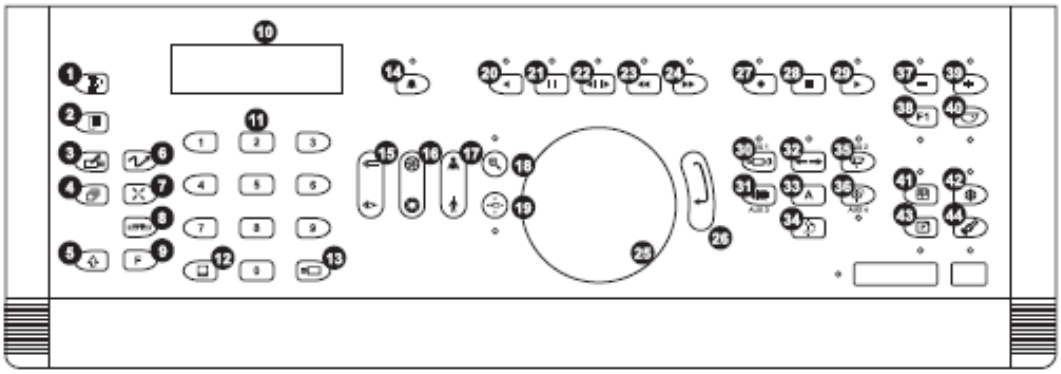
Function	Action
* Program Presets	❶-Call monitor and camera ❷-move camera into position ❸-press **PROGRAM MODE** tab key ❹-enter Preset # ❺-press **PROGRAM PRESET** soft key
* Program Patterns	❶-Call monitor and camera ❷-press **PROGRAM MODE** tab key ❸-press **PROGRAM PATTERN** soft key ❹-enter a number (1-3) ❺-press **PATTERN** PATTERN soft key ❻-maneuver camera ❼-press **END** soft key ❽-press **PROGRAM MODE** tab key to exit
* Clear Patterns (RS-422 only)	❶-Press **PROGRAM MODE** tab key ❷-press **PROGRAM PATTERN** soft key ❸-press Pattern # ❹-press **CLEAR** soft key ❺-press **PROGRAM MODE** tab key to exit
* Program Monitor Tours (Scratchpad Program)(see Note)	❶-Call monitor ❷-press **PROGRAM MODE** tab key ❸-press **KEYB CONFIG** soft key ❹-press **PROG S PAD** Prog S pad soft key ❺-enter camera #, and press **ENTER** ❻-enter dwell time (1-60) ❼-press **DWELL TIME** soft key ❽-repeat steps 5–7 until all cameras are programmed (or the maximum count of 64 entries is reached) ❾-press **OPERATOR** tab key ❿ press **Run** Run soft key
Program Monitor Tours (Operator-Level Smart Card) (see Note)	❶-Call monitor ❷-press **USER SETTINGS** tab key ❸-press **PROG S PAD** Prog S pad soft key ❹-enter camera #, and press **ENTER** Enter soft key ❺-enter dwell time (1-60) ❻- press **DWELL TIME** soft key ❼- repeat steps 4–6 until all cameras are programmed (or the maximum count of 64 entries is reached) ❽- press **OPERATOR** tab key ❾-press **Run** Run soft key

Note: Pressing the **PROG S PAD** Prog S pad soft key deletes the previously programmed sequence, and the "TR CLR" message displays momentarily in the monitor's Status field.

Appendix C: Keyboard Commands for ADCC0200/0300

The table below lists control functions for cameras using ADCC0200 and ADCC0300 keyboards. For further information refer to *ADCC0200 / ADCC0300 Keyboard Installation and Operation Manual*, MP200-300HB-2.

Figure 7. ADCC0200 and ADCC0300 Keyboard Layout



1. Clear
2. Menu
3. View
4. Sequence
5. Shift
6. Pattern
7. Preset
8. Unit select
9. Function
10. LCD display
11. Keypad
12. Monitor
13. Camera
14. Alarm ack
15. Focus
16. Iris
17. Zoom
18. Search
19. Telemetry
20. Reverse play
21. Pause
22. VCR/DVR
23. Rewind
24. Fast forward
25. Joystick
26. Enter
27. Record
28. Stop
29. Start
30. Aux 1
31. Aux 3
32. Autopan
33. Auxiliary
34. Flip dome
35. Aux 2
36. Aux 4
37. Last/ Decrement
38. F1/F2
39. Next/Increment
40. DirectSet
41. Multiscreen
42. Freeze
43. Print
44. Search

Operator Functions

Function	Actions
System Logon	❶-Enter user # ❷-press **Enter** ❸-enter passcode # ❹-press **Enter**
System Log Off	❶-Enter 99 ❷-press F1
Select Monitor	❶-Enter monitor # ❷-press
Call Camera	❶-Enter camera # ❷-press
Pan/Tilt Camera	❶-Move joystick left/right or forward/backward
Zoom In	❶-Twist joystick clockwise or press
Zoom Out	❶-Twist joystick counterclockwise or press
Focus Camera	❶-Press (Far) or (Near)
Adjust Iris	❶-Press iris (Open) or (Close)
Auto Iris	❶-Press F and , , , or
Auto Focus	❶-Press F and , , , or
Camera Flip	❶-Press

Function	Actions
Call Preset	❶-Call camera ❷-enter the Preset # ❸-press
Run Tour	❶-Select monitor ❷-enter Tour # ❸-press
Control Tour	• To hold a Tour, hold down and press • To restart a Tour, press • To step forward or backward through a Tour, press or • To reverse the direction of a Tour, press once. To resume forward, press once. • To stop a Tour, call a camera.
Call Salvos	❶-Enter lowest monitor # ❷-press ❸-enter Salvo # ❹-hold down and press
Acknowledge Alarm	❶-Call alarming monitor ❷-press
View Multiple Sequencing Alarms	❶-Press and to hold sequence ❷-press or to step through alarms
Control Auxiliary	❶-Call camera ❷-press: • Auxiliary 1 on/off • Auxiliary 2 on/off • Auxiliary 3 on/off • Auxiliary 4 on/off **Note:** Auxiliary 4 is not supported by all dome/PTZ protocols and configurations.
Lock Camera On/Off	❶-Enter camera # ❷-hold down and press
View Satellite Sites	❶-Enter site # ❷-hold down and press ❸-call camera as usual **Note**: This function only displays the previous user-selected site number.
Disconnect/Log Off Satellite	❶-Enter local site # ❷-hold down and press ❸-call local camera
Run Pattern	❶-Call camera ❷-enter Pattern # ❸-press
Keyboard Contrast	❶-Press and ❷-use Focus and to increase/decrease contrast ❸-press **ENTER**
VCR Mode	❶-Enter VCR # ❷-press
F2 Functions	❶-Enter function # ❷-press and hold ❸-press

Function	Actions
DirectSet *(SensorNet only)*	• ❶-Press ⊡ only to display or close the DirectSet menu, **or** • ❶-Enter 0 ❷-press ⊡ to display or close the DirectSet menu, **or** • ❶-Enter a number ❷-press ⊡ to select a DirectSet menu command whether or not the menu is displayed **Notes:** • When in Program mode, the ADCC0300 keyboard provides additional administrative functions (see Programming Functions below for instructions for entering Program mode). • All SpeedDome Optima camera domes can receive DirectSet commands, but do not display the menus.

Programming Functions

Note: Programming functions depend on the communications protocol in use and may not be available for your keyboard. Functions having an asterisk (*) in the Function column require **PROGRAM MODE,** which is indicated by the unlocked icon displayed in the LED.

Function	Action
Enter Program Mode	❶-Enter 999 ❷-press F ❸-enter passcode ❹-press **ENTER**
Exit Program Mode	❶-Enter 999 ❷-press F
* Program Presets	❶-Call camera ❷-move camera into position ❸-press F ❹-enter Preset # ❺-press ✕
* Program Patterns	❶-Call camera ❷-move camera into position ❸-press F ❹-enter number (1-3) ❺-press ↻ ❻-maneuver camera with joystick ❼-press ↻ to save pattern
* Clear Patterns	❶-Press F ❷-enter Pattern # (1-3) ❸-press ↻ ❹-press ↻ to delete pattern

Appendix D: Keyboard Commands for ADTTE

The table below explains control functions for cameras using the ADTTE Touch Tracker® Matrix Keyboard. For further information, refer to the *ADTTE Touch Tracker Operator's Manual*, 8000-2675-02.

Figure 8. ADTTE Touch Tracker matrix keyboard layout

Operator Functions

Function	Actions
System Log On	❶-Enter User Code ❷-press **Ack** ❸-Enter System Passcode ❹-press **Ack**
System Log Off	❶-Press **User**
Keyboard Lock/Unlock	❶-Enter keyboard password ❷-press **Lock** (toggles on and off)
Select Monitor	❶-Enter monitor # ❷-press
Call Camera	❶-Enter camera # ❷-press
Lock Camera	❶-Enter camera # ❷-press **2** ❸- press **F1**
Unlock Camera	❶-Enter camera # ❷-press **1** ❸-press **F1**
Pan/tilt Camera	❶-Move control stick left/right or forward/backward
Zoom Camera	❶-Press **Zoom** buttons (left side of control stick) for **Tele** or **Wide**
Focus Camera	❶-Press **Focus** buttons (right side of control stick) for **Far** or **Near**
Adjust Iris	❶-Press **Iris Open** to brighten picture ❷-press **Iris Close** to darken picture
Call Preset	❶-Call camera ❷-enter the Preset # (1-72) ❸-press **Shot**
Run Pattern	❶-Call camera ❷-enter Pattern # ❸-press **Pattern** ❹-press **Run**
Run System Tour	❶-Select monitor ❷-enter Tour # ❸-press **Run** ❹-press **Ack**

Function	Actions
Control Tour	Press **Next** or **Last** to change direction (forward or reverse) for executing a tour Press **Hold** to hold a tour Press **Run** to restart a tour Press **Next** or **Last** to manually step through the cameras of a tour that is on hold
Call Salvo	❶-Call first monitor in group ❷-enter Salvo # ❸-press **Salvo**
Acknowledge Alarm	❶-Call alarming monitor ❷-press **Ack**
Control Auxiliary	❶-Call camera ❷-specify the Auxiliary number (1–4)[(1)] ❸-press **Auxiliary On** or **Auxiliary Off** to turn an auxiliary on or off **Note:** Pressing Auxiliary On or Off without specifying the number activates the previously specified Aux number.
View Satellite Sites	❶-Call local monitor # ❷-enter site # ❸-press **Site** ❹-call remote camera #
Disconnect/Log Off Satellite	❶-Press **Site** ❷-call local camera
DirectSet *(SensorNet only)*	• ❶-Press **Hold** only to display or close the DirectSet menu when not running a tour or attached to an alarming monitor, **or** • ❶-Enter 0 ❷-press **Hold** to display or close the DirectSet menu, **or** • ❶-Enter a number ❷-press **Hold** to select a DirectSet menu command whether or not the menu is displayed **Note:** All SpeedDome Optima camera domes can receive DirectSet commands, but do not display the menus.

Note:
(1) Auxiliary 4 is not supported by all dome/PTZ protocols and configurations.

Programming Functions

Note: The following functions can only be performed with the keyboard in Program (P) mode, indicated by a "P" displayed in the lower right of the LCD. Enter P mode before starting the step sequence listed for each function.

To enter P mode from a locked (L) state, enter your password and press **Lock**. If you need to obtain the password, please contact your system administrator.

Function	Action
Program Presets	❶-Call monitor and camera ❷-press **+** ❸-move camera to position ❹-enter Preset # ❺-press **Preset Enter (**or **Shot Enter)** ❻-press **–** (minus)
Program Patterns	❶-Call monitor and camera ❷-enter Pattern # ❸-press **Pattern** ❹-press **Prog** ❺-maneuver camera ❻-press **Ack**
Clear Patterns (RS-422 only)	❶-Call camera ❷-enter Pattern # ❸-press **Pattern** ❹-press **Clear**
Program Monitor Tours	❶-Call monitor ❷-enter 62 ❸-press **Prog** ❹-enter camera # ❺-press **CAMERA** ❻-enter dwell time (1-60) ❼-press **Prog** ❽-repeat steps 4–7 for all subsequent cameras in tour (up to a maximum of 64 entries) ❾-press **Run**
Arm Monitor	❶-Call monitor ❷-enter arming type ID # (301–315) ❸-press **F2**
Disarm Monitor	❶-Call monitor ❷-enter 316 ❸-press **F2**
Display Current Monitor Arming Type	❶-Call monitor ❷-enter 300 ❸-press **F2**

Appendix E: Auxiliary Key Code Functions

The following special function keys enable you, using the keyboard, to manually operate and control cameras.

F1 Special Function Keys

Function	Action
F1	Releases keyboard control of video trunk
1-F1	Unlocks the current camera
2-F1	Locks the current camera
4-F1	Take snapshot of currently selected monitor and store on a remote IP server
19-F1	Flip Camera 180°
21-F1	Run Pattern 1
22-F1	Run Pattern 2
23-F1	Run Pattern 3
29-F1	Ping Dome(1)
30-F1	Reset Dome
31-F1	Go to start of Pattern 1(1)
32-F1	Go to start of Pattern 2(1)
33-F1	Go to start of Pattern 3(1)

Function	Action
41-F1	Auto Repeat Pattern 1
42-F1	Auto Repeat Pattern 2
43-F1	Auto Repeat Pattern 3
44-F1	Run Apple Peel Pattern(1)
69-F1	Return to Auto Iris/Auto Focus
70-F1	Set Aux 4 Off
71-F1	Set Aux 4 On
99-F1	Logoff from passcode Logon

Note:

(1) For SensorNet and RS-422 domes connected via Direct Connection only.

F2 Special Function Keys

Function	Action
1-F2	Sets on-screen Time and Date display ON
2-F2	Sets on-screen Time and Date display OFF
3-F2	Sets Camera Title, Number, & Status display ON
4-F2	Sets Camera Title, Number, & Status display OFF
5-F2	Displays titles & date/time at the top of the screen
6-F2	Displays titles & date/time at the bottom of the screen
7-F2	Sets on-screen Time, Date, & Title display ON
8-F2	Sets on screen Time, Date, & Title display OFF
21-F2	Sets date format to month-day-year (MM-DD-YY)
22-F2	Sets date format to day-month-year (DD-MM-YY)
23-F2	Sets date format to year-month-day (YY-MM-DD)
24-F2	Steps through date formats

Function	Action
38-F2	Enter/Exit Line Lock phase adjustment mode
39-F2	Enter/Exit Line Lock phase adjustment mode (same as 38-F2)
41-F2	Sets date format to month-day-year (MM-DD-YY)
42-F2	Sets date format to day-month-year (DD-MM-YY)
43-F2	Sets date format to year-month-day (YY-MM-DD)
44-F2	Steps through date formats
45-F2	Disables bell at keyboard for all RS-232 ports
46-F2	Enables bell at keyboard for all RS-232 ports
47-F2	Disables bell signal transmissions to selected keyboard
48-F2	Enables bell signal transmissions to selected keyboard

Function	Action
55-F2	Entering this key combination implies that you will also enter another 2-digit F2 code combination within three seconds: 99-F2 - System Reset or 98-F2 – Reset to Factory Defaults
60-F2	Displays current day of week
61-F2	Sets day of week to Sunday
62-F2	Sets day of week to Monday
63-F2	Sets day of week to Tuesday
64-F2	Sets day of week to Wednesday
65-F2	Sets day of week to Thursday
66-F2	Sets day of week to Friday
67-F2	Sets day of week to Saturday
70-F2	Momentarily displays software version number as “V - - -” in the camera title field of the selected monitor
91-F2	Changes which unit is Active
92-F2	Writes app data (cameras selected on keyboards and other info) to Flash. Entering 92-F2 ten seconds before a front panel reset eliminates the need to resynchronize cameras to monitors
93-F2	Loads the dynamically defined character set to the BVOM
98-F2	Used in combination with 55-F2 to reset the MPCPU to factory defaults, except the direct port settings. This function does nothing by itself.
99-F2	Used in combination with 55-F2 to reset the MPCPU. This function does nothing by itself.
100-F2	Sets video loss mode to OFF for the called camera
101-F2	Sets video loss mode to SYNC ONLY for camera
102-F2	Sets video loss mode to VIDEO LOW for camera
103-F2	Sets video loss mode to VIDEO MED for camera
104-F2	Sets video loss mode to VIDEO HIGH for camera
105-F2	Sets video loss mode automatically for called camera
106-F2	Sets DBVL mode for all cameras automatically and transfers settings to the CPUs to synchronize databases
107-F2	Updates video loss mode settings of all cameras from matrix switcher to the Video Loss Detection module
108-F2	Clears the video loss mode for all cameras
109-F2	Downloads video loss mode of called camera from VLD module to matrix switcher
110-F2	Transfers video loss mode of all cameras from VLD module to matrix switcher
120-F2	End Pattern Definition
121-F2	Define Pattern 1
122-F2	Define Pattern 2
123-F2	Define Pattern 3
130-F2	Save New Pattern
131-F2	Clear Pattern 1
132-F2	Clear Pattern 2
133-F2	Clear Pattern 3
200-F2	Frees remote PTZ slots
202-F2	Resets all Alarms
300-F2	Displays current arming code for selected monitor
301-F2	SSI Monitor Arming(1)
302-F2	SSA Monitor Arming(1)
303-F2	SSM Monitor Arming(1)
304-F2	SHI Monitor Arming(1)
305-F2	SHA Monitor Arming(1)
306-F2	SHM Monitor Arming(1)
307-F2	BSI Monitor Arming(1)
308-F2	BSA Monitor Arming(1)
309-F2	BSM Monitor Arming(1)
310-F2	BHI Monitor Arming(1)
311-F2	BHA Monitor Arming(1)
312-F2	BHM Monitor Arming(1)
313-F2	DHI/DSI Monitor Arming(1)
314-F2	DHA/DSA Monitor Arming(1)
315-F2	DHM/DSM Monitor Arming(1)
316-F2	Disarm Monitor
317-F2	Enable Manual Override
318-F2	Disable Manual Override
998-F2	Transfer Macro from keyboard to system
999-F2	Transfer Macro from system to keyboard

Note:

(1) For an explanation of monitor arming codes, refer to *MegaPower CPU Administrator’s Guide, Appendix I*, 8200-0421-03.

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